

Washington State Bicycle Facilities and Pedestrian Walkways Plan



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Executive Summary

Bicycling and walking in Washington State are becoming increasingly popular as fuel prices skyrocket and people become more aware of health and environmental benefits related to this active form of transportation.

Using current information and data, WSDOT identified more than \$1.6 billion in unfunded bicycle and pedestrian improvements statewide. In addition to identifying infrastructure needs, this Plan sets a statewide goal of decreasing collisions by five percent per year for the next 20 years, while doubling the amount of biking and walking.

People in our communities need and want safe places to ride and walk and they support investments in facilities that make bicycling and walking easier and safer. The state is taking a major step toward accomplishing that goal by establishing policies, guidelines and strategies that support bicycling and walking as an integrated part of the transportation network.

Who was involved in developing the Plan?

Public participation was instrumental in developing the bicycle and pedestrian element of *Washington's Transportation Plan* required by state law (RCW 47.06.100).

With assistance and advice from a multi-agency Steering Committee and a State Agency Advisory Team, WSDOT has produced an updated State Bicycle Facilities and Pedestrian Walkways Plan and a series of six background papers, including a summary of the statewide public opinion survey.

What are the requirements for the Plan?

The state law (RCW 47.06.100) calls for the Washington State Bicycle Facilities and Pedestrian Walkways Plan to include strategies for:

- Improving connections,
- Increasing coordination, and
- Reducing traffic congestion.

It also calls for an assessment of statewide bicycle and pedestrian transportation needs. This Plan satisfies the federal requirement for a long-range bicycle transportation and pedestrian walkways plan.

What did we learn?

Bicycling and walking for transportation is on the rise

Overall, biking and walking are increasing in Washington, particularly in cities where housing infill is occurring. Bicycle commuting in Washington has increased 75 percent in the past ten years.¹ Biking and walking currently account for about six percent of statewide commute trips.² In the Puget Sound Region, bicycling and walking account for nine percent of all trips.³ In several urban core areas across

¹ US Census, www.census.gov/.

² National Household Travel Survey (NHTS; US Census).

³ Regional Household Activity Survey Analysis Report, PSRC (2006)). www.psrc.org/data/surveys/hhsurvey/index.htm

Washington, bicycling and walking account for 15 percent of all trips.⁴ Bicycle touring has also become increasingly popular. The Bicycle Alliance of Washington reports that bicycle touring contributes more than \$6 million dollars annually to local economies in the state.

There is the potential for a lot more biking and walking, particularly in Washington's cities

In Washington State, more than half of all trips are under three miles, yet 80 percent of these trips are made by car.⁵ One of the easiest ways to reduce the number of miles we drive and related emissions is to reduce these car trips under three miles. A recent FHWA report found that increased bicycle and pedestrian safety and mobility improvements in four pilot communities reduced the distance residents traveled by an estimated 156.1 million miles over a year. Based on the reductions reported in miles driven, a reduction of 67,000 metric tons of CO₂ emissions were projected.⁶ Such a reduction in driving, especially for short trips, is an essential ingredient in meeting Washington's goals. However, to achieve these goals barriers must be removed in the built environment that often make walking and biking either uninviting or very difficult.

Washington has a good safety record, but must do better

For pedestrian safety, Washington placed 15th best among states in 2006 with a crash rate of 1.03 pedestrian involved crashes per 100,000 population⁷. Pedestrian traffic fatalities make up a larger portion of all traffic fatalities in cities, approximately 22 percent vs. five percent of all traffic fatalities occurring in rural areas. Over 70 percent of pedestrian traffic fatalities occurred in urban areas, approximately 38 percent on state highways.

For bicycling safety, Washington placed 11th best among the states in 2006 with a bicyclist involved crash rate of 1.09 per 1,000,000 population⁸. Even though Washington has a record for bicyclist and pedestrian safety that compares favorably to many other states, the state must continue to improve the safety record, especially among at-risk populations like the young, the disabled, and the aging. Washington is aggressively pursuing goals outlined within this plan to decrease the number of collisions involving bicyclists and pedestrians by five percent per year, while at the same time doubling bicycling and walking. These goals are within reach based on recent trends.

Public support is strong for building safe places to walk and ride bikes

Washington State must improve mobility as well as safety to meet goals and expectations that more people will walk or bike to work, school, and other destinations in the near future. The public opinion survey WSDOT conducted as part of this Plan showed that 86 percent of Washington residents have bicycled or walked for transportation in the past year. Whether survey respondents were people who rarely walk or bike, serious cyclists, children who walk to and from school, bike commuters, bicycle tourists, or occasionally walk or bike to eat or shop, the majority of those surveyed (a representative sample of Washington residents) said they support "building more safe places to bicycle and walk".

⁴ Ibid.

⁵ National Household Travel Survey (NHTS), www.bts.gov/programs/national_household_travel_survey/.

⁶ FHWA Interim Report to the U.S. Congress on the Nonmotorized Transportation Pilot Program SAFETEA-LU Section 1807, November 2007.

⁷ NHTSA Pedestrian and Bicycle Safety Fact Sheets.

⁸ Ibid.

What is in the Plan?

Washington's Statewide Goal is to increase bicycling and walking while reducing injuries and deaths

The Plan sets a goal of decreasing collisions by five percent per year for the next 20 years, while doubling the amount of biking and walking. This Plan also establishes objectives and performance measures in each of the State's five transportation policy areas (as established in state law, RCW 47.01.012):

- **Preservation:** *Ensure no net loss in pedestrian and bicycle safety, and mobility.*
- **Safety:** *Target safety investments toward known risk factors for pedestrians and bicyclists.*
- **Mobility:** *Increase the predictability, consistency, and connectivity of bicycle and pedestrian facilities.*
- **Environment:** *Walking and bicycling will be part of Washington State's strategy to improve public health and address climate change.*
- **Stewardship:** *Improve the quality of the transportation system by improving transportation access for all types of pedestrians and bicyclists, to the greatest extent possible.*

The Plan identifies and prioritizes statewide needs

Unfunded statewide need for bicycle and pedestrian safety and mobility is high. The current demand for the State Pedestrian and Bicycle Safety Grant program in 2008 alone was \$86 million. In 2005, the State Legislature made \$74 million over the next 16 years available through the Transportation Partnerships Program for this grant program.

A review of adopted local six and ten year plans and state highways found \$1.6 billion in conceptual solutions to pedestrian and bicycle safety and mobility needs including gaps and school related safety improvements. Many of these conceptual solutions have been included in **Appendix D** of this Plan as maps of the three largest urban areas of the State. Complete lists of statewide needs and conceptual solutions are contained in **Appendix A-C**.

New policies and initiatives are needed to reach our goals

Strengthening the project development process, including scoping and project definition, will help to emphasize routine inclusion of all modes in project development vs. relying primarily on stakeholder input to determine appropriate solutions. There are several ongoing efforts and new initiatives that the WSDOT should pursue, including:

- Increased coordination with local and regional agencies, transit providers, and developers to identify additional funding for transportation projects not yet in design or construction. Additional resources would enable WSDOT, in some cases, to develop the projects without losing the bicycle and pedestrian safety and mobility elements. See **Appendix A-C** for a project lists;

- Strengthening WSDOT's manuals and guidelines, including the Design Manual, Scoping Guidance, and Traffic Operations Manual, by incorporating more direction related to improving conditions for bicycling and walking;
- Initiation of a new training program for all transportation engineers that includes a focus on bicycle and pedestrian design and funding;
- Creation of a technical advisory group made up of topic experts to help WSDOT resolve bicycle and pedestrian policy questions; and
- Continued partnership with the State Agency Committee representatives from state agencies and organizations playing a role in improving conditions for bicycling and walking.

Chapter I. Introduction

Key Findings:

- Washington State has a number of existing laws, plans, policies, and programs intended to improve conditions for bicycling and walking. All these efforts should be better coordinated. (See ***Report D: Policies and Procedures*** for a complete listing of current policies and procedures in Washington State.)
- New state legislation enacted in 2008 declares Washington's commitment to address climate change and sets goals for reducing greenhouse gas emissions, increasing clean energy jobs, and reducing expenditures on imported fuel. Additionally, legislation was amended in 2008 to include driver instruction on bicycle and pedestrian safety and mobility.
- Several Washington cities have adopted *Complete Streets* or equivalent policies consistent with the *2007 Energy Independence and Security Act*. To implement *Complete Streets* strategies, WSDOT should strengthen its project development process, specifically scoping guidance for pedestrian and bicycle projects as well as roadway improvement and bridge replacement projects, by including routine consideration of bicycle and pedestrian needs in addition to roadway needs.
- A majority of cities and counties (80 percent, covering 89 percent of the State's population) have current plans that include bicycling and walking policies, projects and programs. However, full implementation of bicycle and pedestrian plans is a challenge for local and state governments due to limited funding for these types of projects.

What is included in the Washington State Bicycle Facilities and Pedestrian Walkways Plan?

The basis for this Plan and the foundation for recommendations came from information collected through a public opinion survey and public comments made during the process. Consistent with Washington State Law (RCW 47.06.100) and federal guidance, the scope of the Plan includes:

#1: Establishing a statewide strategy for addressing bicycle and pedestrian transportation.

Bicycle and pedestrian facilities and connections should be included in all aspects of the transportation system—planning, project development, funding, implementation, and maintenance. This report examines the level of this inclusion.

#2: Integrating bicycle and pedestrian travel with public transportation.

Bicycling and walking are ways people make connections with buses, trains, and ferries. Public transportation extends the journeys that people make by bicycling and walking. All buses, trains and ferries need to be easily accessible for bicyclists as well as pedestrians.

#3: Coordinating WSDOT and local municipalities, regional planning entities, and transit agencies.

To improve safety and mobility, planners and engineers at all levels of government must improve coordination. State, regional, and local policies and operations are analyzed for coordination opportunities.

#4: Determining the role of bicycle and pedestrian transportation in reducing automobile congestion.

Unlike automobiles, bicycling and walking do not cause pollution. Encouraging more people to bike or walk for short trips will reduce the release of harmful carbon emissions. Barriers to walking or cycling must be removed to broaden the appeal of these transportation choices.

#5: Assessing statewide bicycle and pedestrian needs on city streets, county roads, and state highways.

Creating improved conditions for walking and cycling is significantly cheaper than expanding capacity for cars. Once built, bicycle facilities and pedestrian walkways have no hourly operating costs in the way that public transit does.

Who was involved in developing this Plan?

The Washington State Department of Transportation (WSDOT), working with a consultant team, developed the Washington State Bicycle Facilities and Pedestrian Walkways Plan. To ensure that the Plan is grounded in reality, WSDOT also convened a Steering Committee and a State Agency Advisory Team to provide direction and comments throughout development and implementation.

Citizens' comments played a major role in determining the Plan's direction

WSDOT began the work of developing the plan by conducting a statewide public opinion survey about bicycling and walking in Washington State. WSDOT then held four separate initial public hearings around the State to present the results of the survey and to gather public comments on what the Plan should address. WSDOT subsequently prepared six separate background reports, each focusing on a specific aspect of the state plan for bicycling and walking:

- ***Report A: Survey of Public Opinion,***
- ***Report B: Data Analysis,***
- ***Report C: Needs and Funding,***
- ***Report D: Policies and Procedures,***
- ***Report E: Goals, Benchmarks and Performance Measures, and***
- ***Report F: Design Guidance.***

Once the reports were complete, they were posted on the WSDOT bicycling and walking Web page and asked for public comment throughout their development. Each of these reports were made available for public review and each was discussed by the Steering Committee, the State Agency representatives, and WSDOT staff, before being finalized. These reports form the basis for the recommendations contained in the Plan. WSDOT conducted a second round of public hearings around the State on the draft plan prior to finalizing it.

How is the Plan organized?

This plan is organized into four Chapters:

- I. Introduction:** Background information on the Plan, as well as current Washington State bicycle and walking goals and objectives, policies, and related State laws;
- II. Bicycling and Walking in Washington Today:** Current trends in bicycling and walking, the status of infrastructure, safety statistics, programs, funding options, and performance measures;
- III. Recommendations to Improve Conditions for Bicycling and Walking in Washington:** Recommended improvements to goals, policies, infrastructure development, programs, and performance measures; and
- IV. Implementation:** Ideas and guidance on how to implement the recommendations of the previous chapter.

The Plan also includes by reference, the six background reports.

What federal goals and policies influenced the Plan?

Federal Highway Administration (FHWA) Performance Goals

The FHWA first established two twenty-year goals and continues to support these goals in guidance today:

- Double the percentage of total trips made by bicycling and walking in the United States from 7.9 percent to 15.8 percent of all travel trips; and
- Simultaneously reduce the number of bicyclists and pedestrians killed or injured in traffic crashes by ten percent.

Congressional Policy

More recently, the US Congress passed the *Energy Independence and Security Act of 2007*, which outlines the policy of Congress regarding use of *Complete Streets* design techniques. It states,

“It is the sense of Congress that in constructing new roadways or rehabilitating existing facilities, State and local governments should consider policies designed to accommodate all users; including motorists, pedestrians, cyclists, transit riders, and people of all ages and abilities, in order to—

- (1) serve all surface transportation users by creating a more interconnected and intermodal system;
- (2) create more viable transportation options; and
- (3) facilitate the use of environmentally friendly options, such as public transportation, walking, and bicycling.”

What other initiatives influence the Plan?

WSDOT recognizes that bicycling and walking are increasingly important for everyday transportation, especially in Washington’s cities and towns. The benefits of bicycling and walking however, go beyond simply providing a means of travel. Biking and walking also provide health and environmental benefits, issues that compel us to rely on expertise from other agencies and organizations.

How has the Active Community Environments Initiative influenced the Plan?

Active Community Environments Initiative is a project that promotes walking, bicycling, physical activity, and the development of accessible recreation facilities. Funded by the US Centers for Disease Control, the project partners are Washington State Department of Health and Washington State Department of Transportation. This initiative was developed following an assessment across a variety of disciplines; including public health, urban design, and transportation planning. This assessment suggests characteristics of our communities such as proximity of facilities, street design, density of housing; availability of public transit and pedestrian and bicycle facilities play a significant role in promoting or discouraging physical activity.

The *Active Community Environments Initiative* encourages environmental policy to improve public health. The goals are to:

- encourage the development of pedestrian and bicycle friendly environments,
- promote walking and bicycling, and
- disseminate information related to the *Active Community Environments Initiative*.

Statewide activities in promoting the goals of the *Active Community Environments Initiative* include:

- development of the Kids Walk-to-School Program to promote walking and bicycling to school,
- collaborating with public and private agencies to promote Walk-to-School Day,
- development of the Active Community Environments guidebook for public health practitioners to use in partnership with transportation and city planning organizations to promote walking, bicycling, and close-to-home recreation facilities,
- partnering with the National Park Services Rivers, Trails, and Conservation Assistance Program in promoting the development and use of close-to-home parks and recreational facilities,
- collaborating with the King County HealthScape Study in reviewing the relationships of land use, transportation, air quality, and physical activity, and
- collaborating with the Environmental Protection Agency on a national survey to study attitudes of the American public toward the environment, walking, and bicycling.

Additionally, Regional Transportation Planning Organizations across the State have joined the *Active Community Environments Initiative* and are benchmarking their efforts to connect bicycle and pedestrian facilities and improve safety using a Community Assessment survey developed by the Team. For more detail on policies influencing the Plan, see *Report D: Policies and Procedures*.

How are regional governments and municipalities addressing bicycling and walking in their plans?

As part of the development of this Plan, WSDOT conducted a review of local and regional bicycle and pedestrian plans, or transportation plan elements, focusing on bicycling and walking. *Report C: Needs and Funding* contains the review of Local and Regional Bicycle and Pedestrian Plans in Washington.

Over 80 percent of local agencies and counties representing 89 percent of Washington's residents have plans in place that address bicycling and walking. Some are stand-alone master plans, others are contained within comprehensive plans required under Washington's Growth Management Act. In some cases, these plans have been translated into development standards and project specific priorities. Approximately ten percent of local and regional agencies link bicycling and walking, public health, and the built and natural environment through policy or urban planning approaches. Many regional agencies and municipalities have also developed bicycling maps.

Complete Streets – A new process considering all users of transportation when developing projects

In 2007, the US Congress passed the *Energy Independence and Security Act*, which outlines the Congressional policy regarding use of *Complete Streets* design techniques.

In Washington State, the cities of Kirkland, Seattle, and Redmond, as well as the Puget Sound Regional Council have adopted similar *Complete Streets* policies. Other cities in the State have equivalent policies with various names. These policies are intended to improve safety and mobility for all users. The primary initiative of a *Complete Streets* policy is to enable pedestrians, bicyclists, motorists, freight carriers, and transit riders of all ages and abilities to safely move along a corridor. As with Context Sensitive Solutions policies, *Complete Streets* policies require transportation agencies to ensure that all road projects result in a design appropriate to local needs.

A *Complete Streets* design policy is defined by several elements including:

- Language that specifies ‘all users’. This includes pedestrians, bicyclists, transit vehicles and users, and motorists of all ages and abilities;
- A primary initiative of creating a comprehensive, integrated, connected network;
- Recognition of the need for flexibility: that all streets are different and user needs will be balanced;
- Applicability to all roads;
- Applicability to both new and retrofit projects, including design, planning, maintenance, and operations for the entire right of way;
- Description of any exceptions specifically and establishment of a clear procedure that requires executive or elected official(s) approval of exceptions;
- Direction to use the latest and best design standards;
- Direction that *Complete Streets* solutions fit in with the context of the community; and
- Performance standards with measurable outcomes.

A *Complete Streets* design policy typically differs from a Context Sensitive Solutions (CSS) policy in several ways. The primary difference is that CSS policies generally emphasize stakeholder involvement in planning processes, while *Complete Streets* design policies emphasize routine inclusion of all modes in project development.

Put another way, while CSS policies seek to involve stakeholders in considering a transportation facility in its entire social, environmental, and aesthetic context, *Complete Streets* policies assert that providing for safe travel by users of all modes is the primary function of a transportation corridor or project.

What is WSDOT doing to implement Complete Streets?

As first steps, WSDOT has adopted a policy framework and a comprehensive performance measurement program that reports quarterly on all aspects of the agencies work in a publication called the Gray Notebook. WSDOT continues to develop implementation strategies consistent with the Congressional Policy on *Complete Streets*.

Chapter II. Bicycling and Walking in Washington Today

Key Findings:

- Although Washington has a record for bicyclist and pedestrian safety that compares favorably to other states across the US (15th best in pedestrian safety and 11th best in bicycle safety), we must continue to improve the safety record, especially among at-risk populations like the young and the aging. In the ten year period between 1997 and 2006, 103 cyclists and 706 pedestrians died on Washington's roads. Walkers and cyclists are killed at a disproportionate rate. Bicyclists and pedestrians account for six percent of all trips statewide and are involved in 13 percent of all fatal traffic collisions. To read the complete report on data and trends, see *Report B: Data Analysis*.
- Based on the statewide survey, most people in Washington, 86 percent, have biked or walked for transportation over the past year. 70 percent of Washington residents surveyed support an increase in spending to create more safe places to bike and walk if current transportation funds are used; over 50 percent of citizens supported a tax increase. For more survey details, see *Report A: Survey of Public Opinion*.
- Washington has benchmarks and performance measures that provide information about pedestrian and bicycle safety, but limited data and performance measures related to bicycle and pedestrian mobility, preservation, health and environment and stewardship.
- Based on analysis of the data and information available, the greatest opportunity for improving bicycle and pedestrian safety and mobility appears to be improving crossings, connections, and trail systems within cities and urbanizing areas.
- The State lacks data about bicycle and pedestrian law enforcement. Many people commented during development of the Plan that improved law enforcement will result in a reduction in fatal and injury traffic collisions involving bicyclists and pedestrians. See *Report B: Data Analysis* for additional information on bicycle and pedestrian law enforcement.
- Washington has that encourage people to bicycle and walk, but limited resources to improve the built environment for biking and walking, for enforcement of biking and walking laws, and for providing public education. Bicycle and pedestrian engineering improvements are approximately two percent of the transportation budget. (For a detailed list of current engineering, encouragement, enforcement, and education efforts in Washington, see *Report C: Needs and Funding*.)

What do Washington residents think about bicycling?

As background for this Plan, WSDOT conducted a statewide public opinion telephone survey in April 2007. This survey has since been repeated by Puget Sound Regional Council, Vancouver, Camas and several other cities. This statewide survey was commissioned to determine:

- The most popular modes of transportation;
- The prevalence of regular walking and biking;
- The ease of walking and biking in communities;
- The support for state spending on walking and biking improvements;
- The importance of transportation projects; and
- The influences on choice of transportation modes.



The survey revealed that a significant number of Washington citizens bicycle and walk regularly and that they either strongly support or support more investment in bicycle and pedestrian improvements. *Report A: Survey of Public Opinion* contains the complete text of the survey, as well as a more complete discussion of the results.

Regarding bicycling, the results of the survey showed:

- 27 percent of respondents used a bicycle to get from place to place in the last year;
- 37 percent said they bicycled at least ten minutes per week “for any reason”;
- Of this group, the average trip length was 6.5 miles; and
- Of the four percent who ride two to six times per week, the average trip length was 10.2 miles.

In response to questions regarding the ease of bicycling in their communities, the survey showed:

- 23 percent of citizens who bicycle at least once per week said it is “somewhat difficult” to bicycle in their communities;
- 24 percent of citizens who do not bicycle at least once per week said it is somewhat difficult to bicycle in their communities; and
- 15 percent of citizens who do not bicycle at least once per week said it was very difficult.

When asked why bicyclists find it somewhat or very difficult to bicycle in their communities, they gave the following reasons (Weather conditions were an option):

- No bike lanes/roads too narrow/no shoulder;
- Busy/too much traffic;
- Terrain unsafe; and
- No trails or paths.

Finally, 70 percent of Washington residents surveyed support an increase in spending to improve bicycling if current transportation funds are used, with 42 percent saying they strongly support this. Over 50 percent of citizens supported a tax increase if new taxes would be required to create more safe places to bike and walk. For more survey details, see *Report A: Survey of Public Opinion*.

What do Washington residents think about walking?

Regarding walking, the results of the survey showed:

- 59 percent of respondents walked to get from place to place in the last year;
- 24 percent walk every day;
- 49 percent walk more than once per week; and
- The average distance of a walking trip was 1.9 miles.



In response to questions regarding the ease of walking in their communities, respondents showed that:

- 43 percent of people who walk at least once per week find it very easy;
- 19 percent of this group find walking in their communities somewhat or very difficult; and
- Of citizens who do not walk at least once per week, 23 percent find it somewhat or very difficult to walk in their communities.

The most common reason given for believing that it's somewhat or very difficult to walk was "no sidewalks".

When asked how to improve conditions for walking in their communities, people offered the following recommendations:

- More pedestrian facilities such as sidewalks, paths, lighted areas, crosswalks, safe signals and safe intersections;
- Make pedestrian areas safer; and
- Enforce traffic laws.

Finally, 77 percent of Washington State residents surveyed support an increase in spending to improve walking conditions if taxes are not increased and current transportation funds are used, with 48 percent saying they strongly support this. Over 50 percent of citizens supported a tax increase if new taxes would be required to create more safe places to bike and walk.

The overall participation figures for walking and bicycling activities, along with the stated willingness to spend more on bicycling and walking, appear to support increased efforts to expand the bicycling and walking infrastructure and related programs. For more survey details, see *Report A: Survey of Public Opinion*.

What funding is available for bicycle and pedestrian projects and programs in Washington?

Funding is an extremely important part of bicycle and pedestrian policy since it makes building new facilities, maintaining old ones, and providing education, enforcement, and encouragement programs possible. For the past 15 years, federal laws have strongly supported the inclusion of pedestrian and bicycle facilities in transportation plans and projects and supplied a consistent source of funding through federal *Transportation Efficiency Acts* for these activities.

Major sources of funding for bicycle and pedestrian programs in Washington are as follows:

Federal Transportation Enhancement Funding

Since 1991, Federal Transportation Enhancement funding has historically played a very important role in funding bicycle and pedestrian improvements in Washington, providing over \$170 million to local agencies and others for projects that strengthen the cultural, aesthetic, or environmental value of our transportation system. The funds are available for 12 transportation enhancement activities that fall into four main groups:

- pedestrian and bicycle projects;
- historic preservation related to surface transportation;
- landscaping and scenic beautification; and
- environmental mitigation (highway runoff and wildlife protection only).

The Transportation Enhancement Program was created to invest in a more balanced multimodal approach to transportation mobility and accessibility. These federal funds have also leveraged a significant local match from cities and counties across the State.

State and Federal Safe Routes to School Funding

The purpose of the Safe Routes to Schools Program is to increase the number of children walking and biking to school safely. Eligible projects include three elements:

- engineering Improvements;
- education and encouragement efforts; and
- enforcement efforts.

In 2003, the Washington State Legislature approved a \$1 million pilot program. In 2005, the legislature included \$74 million over the next 16 years in the Transportation Partnerships Program to support both the Pedestrian and Bicycle Safety grants and the State Safe Routes to Schools grants. These projects include pedestrian and bicycle paths, sidewalks, safe routes to schools, and transit through this program.

In 2006, the federal government established the National Safe Routes to Schools Program and currently provides federal funding to support Washington's program.

Demand for this program is high. The number of projects seeking funds doubles yearly. This year, WSDOT received 115 applications, totaling more than \$48 million in requests, and expects to award \$5 million.

Since 2004, a total of \$11 million has been provided to fund 52 projects. The 52 funded projects were selected from 200 applications totaling over \$50 million in requests. These funded projects will improve walking and biking conditions for 73 schools and approximately 15,000 students.

Preliminary findings indicate that the Safe Routes to Schools program is a success. Some schools in Washington have had dramatic increases in walking and biking (up to 500% and 400% respectively) as a result of Safe Routes to School projects. On average, Safe Routes to School projects double the number of children biking and walking to school.

State Pedestrian and Bicycle Safety Funding

The state legislature established the Pedestrian and Bicycle Safety Program to address the nearly 400 statewide fatal and injury collisions involving pedestrians and bicycles each year. These safety-focused projects may also support increased mobility and access.

Demand for this program is also high. For the past two funding cycles, one-quarter of all applications received grants. For the current funding cycle, WSDOT received 93 applications totaling more than \$36 million in requests, and expects to award \$7 million.

Since 2005, the Pedestrian and Bicycle Safety grant program has provided nearly \$15 million to fund 46 projects across the State. Each of the funded projects proposed improvements to locations known to have multiple serious or fatal pedestrian and/or bicyclist involved collisions.

What other funding sources are available?

Washington has other laws establishing funding for bicycle and pedestrian projects. Cities and towns can use road construction and maintenance funds for building, improving, and maintaining bicycle paths, lanes, roadways, and routes. Funds can also be used for improvements to make existing streets and roads more suitable and safer for bicycling. The only limit is that any such facility is suitable for bicycle *transportation* purposes and not solely for recreational purposes. Bicycle paths, lanes, or routes may also be constructed, maintained, or improved from county road funds.

There are also other smaller funding sources available for bicycle and pedestrian facilities or programs including:

- Small City Sidewalk Program: The Transportation Improvement Board provides state gas tax funds for pedestrian projects. These projects improve safety, provide access, and address system continuity and connectivity. The program is on an annual funding cycle.
- Washington Scenic Byways Program: WSDOT provides federal funding for projects on highways designated as National Scenic Byways, All-American Roads, or as State Scenic Byways. It is a priority for these projects to be consistent with a corridor management plan for a byway. Tourist amenities, bicycle and pedestrian facilities, and signing are eligible for this grant program.
- School Zone Safety Program: The Washington Traffic Safety Commission (WTSC) administers funds for increased school zone speed enforcement, school patrols and crossing guard programs, and innovative approaches to school zone safety using the fines collected in school zones. These grant projects are selected by the Cooper Jones Committee.

- Washington Wildlife and Recreation Program: Washington's Recreation and Conservation Office administers the state's share of the federal funding for recreational trails.
- Bicycle Registrations: Under Washington law, cities and towns have the right to collect bicycle registration and violation fees. Of this money, 75 percent must be used for building and maintaining bicycle paths and roadways or for reimbursing registration program or enforcement expenses. No Washington cities or towns currently collect these fees primarily because the administrative fees would exceed 25 percent of funds collected.

Report D: Policies and Procedures contains a detailed list of the various funding sources available for bicycle and pedestrian facilities and programs.

How does Washington gauge improvements in bicycling and walking conditions?

The overall objective of setting benchmarks and collecting and evaluating data is to gauge continued progress toward improving bicycling and walking safety and mobility in Washington State. The following describes benchmarks or other tools used by state agencies to track, monitor and report conditions for bicyclists and pedestrians in Washington. For more detail, see *Report E: Benchmarks and Performance Measures*.

WSDOT collects safety related measures for bicycling and walking

Washington State Department of Transportation, currently compiles law enforcement data and tracks the number of bicycle and pedestrian collisions, both fatal and non-fatal, with motor vehicles. As part of this reporting, WSDOT tracks these collisions by the age and gender of the victim, time of day, location, route class, and speed limit. The data also includes contributing factors in these collisions and may include information, such as: driving, biking or walking while under the influence of drugs or alcohol.

Even with the existing efforts to accurately track bicycle and pedestrian crashes, a recent FHWA study of hospital emergency room data suggests that from 40 to 60 percent of bicycle crashes are not captured in highway reporting data.⁹ This is often because the crashes are never reported to the police or take place off public roadways.

Table III-1. shows existing safety related performance measures tracked by WSDOT.

⁹ FHWA, *Injuries to Pedestrians and Bicyclists: An Analysis Based on Hospital Emergency Room Data*, FHWA-RD-99-078

Table III-1. Existing Safety Related Performance Measures

Measures	Source	Summary Existing Conditions (2006) – Benchmark
Number of annual bicycle or pedestrian involved traffic crashes.	WSDOT	400 average annual
Number of annual fatal bicycle or pedestrian crashes.	WSDOT	88 average annual
Washington's Rank Among State's for Bicyclist and Pedestrian Fatalities	WSDOT	15th lowest for pedestrian fatalities, and 11th lowest for bicyclist fatalities
Percentage of Pedestrian and Bicycle Fatalities of All Traffic Fatalities	WSDOT	13 percent of all traffic related fatalities (six percent of all trips)
Washington Metro Areas Rank for Pedestrian Fatalities	2004 Mean Streets	2004 – Seattle-Tacoma-Bremerton tenth worst in the nation with 18 percent of traffic fatalities that were pedestrians
Percentage Pedestrian and Bicycle Fatalities For At-Risk Groups (Ages 0-14 and 71+)	WSDOT	(1999-2006) 27 percent of pedestrian involved fatal traffic collisions involved people in at-risk age groups
Percentage Reduction in Pedestrian Fatalities at Crosswalks	WSDOT	15 percent of fatalities occur in crosswalks; 51 percent occur where marked crosswalks are not present
Number of Cities and Counties with Adopted Bicycle Helmet Ordinances	WSDOT	24 covering over 50 percent of the state population

Some mobility related performance measures are also available

WSDOT's Strategic Plan offers performance measures for many aspects of the Department's work. Several of the performance measures focus specifically on bicycle and pedestrian facilities. The Office of the Superintendent of Public Instruction also provides some mobility related measures, as shown in **Table III-2**.

Table III-2. Existing Mobility Related Performance Measures

Measures	Source	Summary Existing Conditions (2006) – Benchmark
Percent growth in miles of trails or on street bicycle facilities per year	WSDOT	Seven percent
Percent growth in miles of sidewalk per year	WSDOT	13 percent on state highways
Total linear miles of designated bicycle facilities – bike lanes and shared use paths	WSDOT	1,006 miles of trails built or operated by WSDOT and 70 miles of bicycle lanes on state highways
Total linear miles of sidewalks on state highways	WSDOT	310 miles
Percentage of Cities and Counties with Current Bicycle & Pedestrian plans	WSDOT	80 percent
Portion of State, Regional and Local Transportation Agencies with Adopted ADA Transition Plans/Implementing ADA Transition Plans	WSDOT	0
Number of schools/students participating in the Safe Routes to School Program	WSDOT	73 schools and approximately 15,000 students
Number of students being transported by yellow school bus to Washington schools	OSPI	430,000 students a day

Washington State needs more information about biking and walking related to public health and the environment

There are few current resources available for performance measures that connect bicycling, walking, and public health and the environment as shown in **Table III-3**. This area presents an opportunity for research and expansion of the information currently collected.

Table III-3. Existing Health and Environment Related Performance Measures

<i>Measure</i>	<i>Source</i>	<i>Summary Existing Conditions (2006) – Benchmark</i>
The percentage of people in Washington living within a walkable or bikable distance to goods and services	DOH	75 percent of Washington residents live within a 10-minute walk of one community destination (e.g. school, grocery store, bank, post office); 20 percent live close to six community destinations / TBD
Greenhouse gas emissions reductions attributed to installation of bicycle and pedestrian facilities	Governor's Climate Initiative, Transportation Working Group	Reduction of 58,000 metric tons CO ₂ (based on unpublished data from Bay Area Air Quality Management District, ICF Consulting 2006 showing that on average for every \$340 invested, one metric ton of automobile CO ₂ is reduced).

Chapter III. Policy Recommendations to Improve Conditions for Bicycling and Walking in Washington

Key Findings:

- To improve conditions for biking and walking statewide, this plan establishes a goal of decreasing collisions by five percent per year for the next 20 years, while doubling biking and walking in Washington.
- The Plan also establishes objectives and performance measures in each of the State's five transportation policy areas (as established in State Law, RCW 47.01.012):

Preservation: *Ensure no net loss in pedestrian and bicycle safety, and mobility.*

Safety: *Target safety investments toward known risk factors for pedestrians and bicyclists.*

Mobility: *Increase the predictability, consistency, and connectivity of bicycle and pedestrian facilities.*

Environment: *Walking and bicycling will be part of Washington State's strategy to improve public health and address climate change.*

Stewardship: *Improve the quality of the transportation system by improving transportation access for all types of pedestrians and bicyclists, to the greatest extent possible.*

Washington's Statewide Goal is to increase bicycling and walking while reducing injuries and deaths

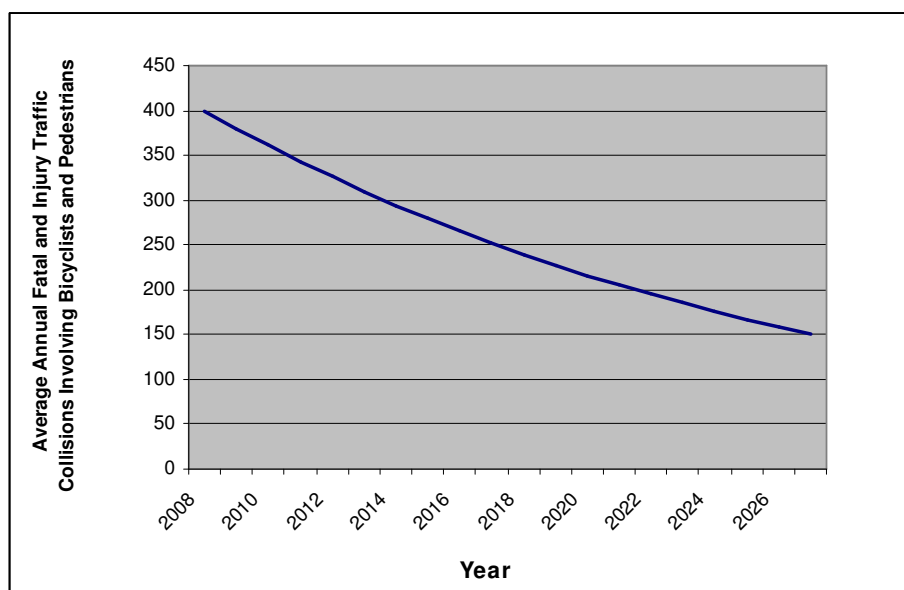
After conducting a review of federal guidance and existing state, local, and regional plans within Washington and in other states, common goals clearly emerge. Local and regional agencies, FHWA, the Governor's Climate Challenge, WSDOT's Business Directions Strategic Plan, Washington Department of Health's Nutrition and Physical Activity Plan, and Washington's State Highway Safety Plan – Target Zero all establish specific measures in pursuit of a shared goal, and several identify the same 20 year goals:

- Double the percentage of total trips made primarily by bicycling and walking in Washington within the next 20 years; and
- Simultaneously reduce the number of bicyclists and pedestrians killed or injured in traffic crashes by five percent each year.

This goal is consistent with the new Transportation Policy Goals established by the 2007 State Legislature (RCW 47.01.012) and supports Washington's commitment to address climate change and setting goals for reducing greenhouse gas emissions, increasing clean energy jobs, and reducing expenditures on imported fuel added to State Law (HB 2815) in 2008.

If successful in reaching these goals, the total trips made primarily by bicycling and walking have the potential to double from six percent of all trips statewide to 12 percent. The best opportunity to achieve this goal is inside cities and urbanizing areas. For example, Puget Sound Regional Council reports that bicycling and walking account for nine percent of all trips today which would need to increase to 18 percent by 2028 in order to help achieve statewide goals. At the same time, the statewide average fatal and injury traffic collisions would decrease from 400 each year to about 150 each year.

Figure III-1. Impact of Reducing Bicyclist and Pedestrian Traffic Crashes by 5 percent per year



How will Washington establish policies and performance measures?

In order to implement the Bicycle Facilities and Pedestrian Walkways Plan and to fully integrate bicycling and walking into the transportation system, local governments, regional and state agencies will have to take coordinated implementation steps.

This plan proposes a statewide goal and objectives in each of the State's five transportation policy areas (as established in State law, RCW 47.01.012) including:

- Preservation
- Safety
- Mobility
- Environment
- Stewardship

The following section discusses each of these objectives for improving conditions for bicycling and walking in Washington. Implementation steps specific to WSDOT and performance measures are also listed. Regional and local agency commitment and commitment from other state agencies to implement the Plan is discussed in Chapter IV.

Preservation Objective: 2-5 year implementation

Preservation Objective:	<i>Ensure no net loss in pedestrian and bicycle safety, and mobility</i>
WSDOT Implementation Steps:	<p>WSDOT will work with local agencies, transit providers, and developers to identify additional funding for projects not yet in design or construction to develop the entire project including elements addressing bicycle and pedestrian safety. See Appendix A-C for a complete list of projects.</p> <p>WSDOT will implement a project development process, specifically scoping guidance for pedestrian and bicycle projects as well as roadway improvement and bridge replacement projects, to include routine consideration of bicycle and pedestrian needs in addition to roadway needs.</p> <p>Review state trail design and operations standards (as outlined in <i>Report F: Design Guidance</i>).</p>
Performance Measures:	<p>Documented use of state and local Paths and Trails expenditures (RCW 47.30).</p> <p>Addition of bicycle and pedestrian facilities to the WSDOT Maintenance and Accountability Plan.</p>



Pedestrian/rail crossing treatment at high volume pedestrian location



Workzone accommodations



ITS trail signage to improve safety at roadway/trail intersections.



Trail crossing alert system at intersection

Safety Objective: 2-5 year implementation

Safety Objective:	<i>Target safety investments toward known risk factors for pedestrians and bicyclists.</i>
WSDOT Implementation Steps:	<p>WSDOT and WTSC will collaborate to implement safety education programs and legal enforcement mechanisms for pedestrians, bicyclists, and motorists.</p> <p>WSDOT will expand technical training to engineers and planners, law enforcement officials, and education officials.</p> <p>WSDOT, cities, and counties will address known risk locations on the roadway and bridge system to help ensure safe access by bicyclists and pedestrians.</p>
Performance Measures:	<p>Number of law enforcement officers receiving training on bicyclist and pedestrian rights and responsibilities per year.</p> <p>Track the ratio of citations issued to motorists, pedestrians, and cyclists.</p> <p>Number of annual bicyclist and pedestrian involved collisions (fatal and non-fatal).</p> <p>Track Washington metro areas rank and other US cities for pedestrian safety.</p> <p>Percentage of pedestrian and bicyclist fatalities for at-risk groups (Ages 0-14 and 71+).</p> <p>Number of unmarked vs. marked/signed/signalized crossings within cities.</p> <p>Percentage of state population affected by locally adopted bicycle helmet ordinances.</p> <p>Number of students receiving pedestrian and/or bicycle safety education or skill training.</p>



Pedestrian safety improvement at a school crossing.



Safety and mobility training courses for all ages.

Mobility Objective: 5-10 year implementation

Mobility Objective:	<i>Increase the predictability, consistency, and connectivity of bicycle and pedestrian facilities.</i>
WSDOT Implementation Steps:	<p>WSDOT and other state agency plans, policies, and standards will recognize bicycling and walking as viable modes of transportation and as being supportive of tourism and economic development in Washington.</p> <p>WSDOT will work with local agencies, transit providers, and developers to identify additional funding for projects not yet in design or construction to ensure development of the entire project including elements addressing bicycle and pedestrian mobility. See Appendix A-C for a complete list of projects.</p> <p>WSDOT will implement a project development process, specifically scoping guidance for pedestrian and bicycle projects as well as roadway improvement and bridge replacement projects, to include routine consideration of bicycle and pedestrian needs in addition to roadway needs.</p> <p>WSDOT will partner with local agencies and developers to reduce short motor vehicle trips (both commute and non-commute trips) and related CO₂ emissions by increasing biking and walking. In Washington State, over half of all trips are under three miles, yet 80 percent of these trips are made by car (National Household Travel Survey).</p> <p>WSDOT will initiate a new training program for all transportation engineers (state and local) focused on bicycle and pedestrian design and funding programs.</p> <p>WSDOT will benchmark and track statewide bicycle and pedestrian system users in a database.</p> <p>Bicycle and pedestrian mobility will be considered in all WSDOT transportation plans and corridor studies; from the project level to the programmatic level.</p> <p>WSDOT and other state agencies will continue to partner with state agency representatives that play a role in improving bicycling and pedestrian mobility.</p>
Performance Measures:	<p>Net total linear miles of designated bicycle facilities (bike lanes and shared use paths).</p> <p>Net total linear miles of sidewalks on state routes within cities.</p> <p>Number of cities and counties with bicycle and/or pedestrian plans (should include measurable goals and project lists).</p> <p>Percentage of students walking or bicycling to Washington schools.</p> <p>Percentage of trips and miles traveled by bicycling and walking.</p> <p>Bicycle and pedestrian user counts on state highways, major arterials, trails, and related bicycle miles traveled.</p>



I-90 Trail Connection



8 inch sidewalk height designed to meet bus ramp for smooth loading and unloading

Health and Environment Objective: 5-15 year Implementation

Health and Environment Objective:	<i>Increasing walking and bicycling will be part of Washington State's strategy to improve public health and address climate change.</i>
WSDOT Implementation Steps:	WSDOT will participate in and conduct research to better understand the relationship between public health and the transportation system.
	WSDOT will promote bicycling and walking, not only as a viable means of commute transportation, but as an important strategy to improve public health and maintain environmental quality.
	WSDOT will consider stormwater management strategies that maximize resources by serving multiple functions, such as bio-retention areas serve as buffers for sidewalks or refuge islands and pervious surfaces.
	WSDOT and Regional Transportation Planning Organizations will include bicycling and walking in transportation modeling and climate change evaluations as part of applicable transportation plans and projects.
	WSDOT will include bicycle and pedestrian facilities as part of the State's strategy for reducing VMT and CO ₂ generated from the burning of fossil fuels.
Performance Measures:	Monitor achievement of VMT goals involving bicycle and pedestrian efforts.
	Examine lessons learned from the pilot SR520 Health Impacts Assessment.
	Increased access to goods and services (percent of population within two miles of goods and services).
	Percentage of and type of trips made by biking and walking.



Increased trail access increases walking and bicycling among area residents



Bike lanes improve safety and predictability for cyclists and motorists along a busy street in Seattle area

Stewardship Objective: 10-20 year Implementation	
Stewardship Objective:	<i>Improve the quality of the transportation system by improving transportation access for all types of pedestrians and bicyclists, to the greatest extent possible.</i>
WSDOT Implementation Steps:	WSDOT will raise awareness of the importance of accessibility and design that strives to provide access to as many people as possible through training for state, regional, and local engineers, planners, and other transportation professionals and interested parties.
	WSDOT will require greater involvement of bicycle and pedestrian safety and mobility experts on transportation committees and project advisory teams.
Performance Measures:	Number of state, regional and local transportation personnel receiving design training.
	Portion of state, regional and local transportation agencies with adopted ADA Transition Plans and Implementing ADA Transition Plans. These plans identify locations where the transportation system are not accessible to people with physical challenges, people pushing baby carriages, or people with other limitations to mobility.
	Percentage of transportation plan and project teams that include bicycle and pedestrian representatives.



Refuge island design provides access to as many people as possible.



Trail improvements consider all types of bicyclists and equipment.

Chapter IV. Implementing the Plan

Key Findings:

- \$1.6 billion is needed to pay for bicycle and pedestrian projects identified by local governments in their Transportation Improvement Plans (TIPs) and by WSDOT for necessary upgrades to the state highway system. (For a complete list of needs and maps of conceptual solutions, see **Appendix A-D** of this Plan.)
- Planning and scoping guidance for WSDOT roadway improvement and bridge replacement projects is needed and should include routine consideration of bicycle and pedestrian needs in addition to roadway needs (scoping is the earliest stage of project design where potential solutions to a problem are identified).
- Local agencies can help meet the statewide goal of doubling bicycling and walking while decreasing pedestrian and bicyclist involved collisions by five percent per year by incorporating this goal (or more assertive goals for areas already exceeding the state average) and including project specific detail in their plans.
- A greater role for Regional Transportation Planning Organizations is recommended to improve intra-county and links to schools, transit, and ferries. The majority of public comments we received complained of a lack of coordination between adjoining local governments and agencies.

How will the state meet the goals of this Plan?

In order to implement the Bicycle Facilities and Pedestrian Walkways Plan and to fully integrate bicycling and walking into the transportation system, local governments, regional and state agencies will have to take coordinated implementation steps. Increased staffing levels or specific assignments may be necessary to ensure completion of implementation steps in all agencies responsible for improving conditions for bicycling and walking. Above all, increased support and awareness of bicycling and walking as modes of transportation will be necessary in order to meet the goals outlined in this Plan. The following section discusses some specific steps that agencies and organizations can take to move toward the goals and policy recommendations of this Plan.

What are the statewide priorities for bicycle and pedestrian facilities and what will they cost?

State law (RCW 47.06.100) requires an assessment of statewide need to be conducted as part of this Plan. A review of adopted local short range plans and state highway needs revealed \$1.6 billion in pedestrian and bicycle safety and mobility needs across the state. For context, the 2005 Washington State Legislature provided a 16-year expenditure plan called the Transportation Partnership Act that totaled \$7.1 billion. Detailed lists and maps of statewide needs and conceptual solutions are contained in **Appendix A-D**.

How did WSDOT assess statewide need?

The need for bicycle and pedestrian improvements on city, county and state roads is significant. Most Transportation Improvement Plans (TIPs) include bicycle, pedestrian, and ADA projects. In the most current TIPs submitted to WSDOT in 2007, the unfunded statewide cost for bicycle and pedestrian conceptual solutions is more than \$1.2 billion. **Table IV-1** below provides a summary of those costs.

Table IV-1. Unfunded Bicycle and Pedestrian Projects Identified in Local Transportation Improvement Plans (TIPs)

Type of Request	Total Cost
Shared Use Path	\$480,230,000
Sidewalks	\$468,130,000
Shoulders	\$189,050,000
Roadway Crossings	\$55,240,000
Bicycle Lanes	\$32,620,000
Ferry Access	\$20,000,000
Lighting	\$1,211,000
Planning or Education	\$1,010,000
ADA Compliance	\$520,000
Signage	\$120,000
Bicycle Parking	\$80,000
Total Local Planning Estimates	\$1,248,211,000
Total State Highway Planning Estimates	\$400,000,000
Total Statewide Planning Estimates	\$1,648,211,000

How are state interest projects identified?

In all, over 200 locations on or near Washington State highways were identified for potential improvement and conceptual solutions for each were developed with a planning level cost estimate of \$400 million. See **Appendix A-C** for a complete list of projects and planning level cost estimates (2006 dollars).

WSDOT included these projects in three broad categories:

- **School Related Projects** or projects that improve conditions for bicycling and walking near schools on or very near state highways.
- **Gap Projects** or projects that improve conditions for bicycling and walking by filling a gap or missing piece of sidewalk, trail, or a crossing that connects these facilities and creates a network.
- **No Net Loss Projects** or projects that ensure “no net loss” in pedestrian and/or bicycle safety as larger state funded road projects are constructed (i.e., projects that increase roadway width, projects that may increase motor vehicle speeds, projects that may cross trails, etc..)

Improving conditions for biking and walking through design

In addition to infrastructure needs, WSDOT has identified the need to improve project development processes, specifically project scoping and project definition, to ensure that future transportation projects include consideration of bicycle and pedestrian safety and mobility.

WSDOT, in coordination with local agencies, will establish procedures to formally include bicycle and pedestrian facilities as part of the project development process. WSDOT will establish a scoping process for bicycle and pedestrian facilities and guidance for locating transit. Scoping is the earliest stage of project design where potential solutions to a problem are identified. Scoping guidance for roadway improvement and bridge replacement projects is also needed and should include routine consideration of bicycle and pedestrian needs in addition to roadway needs. During future updates of guidance and standards, specifically WSDOT's Design Manual, Traffic Operations Manual and Scoping Guidance, WSDOT will consider *Report F: Design Guidance* which identifies opportunities to incorporate additional information on bicycle and pedestrian design including:

- Accessible design;
- Channelization plans – bicycle and pedestrian markings;
- Work zone accommodation for bicycles and pedestrians;
- Safe Routes to School and school zone accommodations;
- Mid-block crossings and crosswalk spacing;
- At grade pedestrian crossing treatment updates;
- Utilities within sidewalks, grates, steel plates, and poles;
- Countdown pedestrian signals;
- Pedestrians and roundabouts;
- Bicycle lane markings, intersection markings and detectors, and bike boxes;
- Sidepath design or design of bicycle and pedestrian trails adjacent to roadways;
- Bicycles at roundabouts; and
- Wayfinding and signage.

Connections to and from transit stops and park and rides are a key consideration in project development and scoping in order to improve the safety and mobility for bicyclists and pedestrians.

- Intersections close to bus stops should have marked crosswalks, sidewalks and traffic signals where needed.
- There should be easy pedestrian and bicycle access to park and ride lots and train stations.

There are other considerations that affect the mobility or safety of bicyclists and pedestrians to be considered as transportation projects are being developed, designed, updated, or reviewed. They include:

- narrowed or disappearing bike lanes or shoulders cause cyclists to move suddenly into traffic;
- a speed bump that is not easily visible on the shoulder can surprise the rider and cause a fall;
- unclear signage regarding bike routes can cause cyclists to miss the intended routes and end up on busy roadways;
- poor drainage grate design or placement, and abrupt paving margins create hazards to bicyclists;
- depressed/sunken utility (“manhole”) covers often occur in bike lanes or in sections of vehicle lanes where a bicyclist may travel;
- cars parked intermittently along the roadway create cycling hazards when they force cyclists into the roadway to move around them and when they increase the chance of a car door suddenly swinging into the path of a cyclist; and
- wide vehicles with protruding side or wing mirrors create hazards for cyclists.
- Complete paving of roadway and shoulder to avoid uneven pavement on the shoulders or in bike lanes.

Administrative suggestions for improving project development procedures and making them more inclusive of bicycle and pedestrian needs include:

- requiring design approval authorities and bicycle and pedestrian experts within WSDOT to work together on project definition, scoping, and design;
- requiring training for all transportation engineers on bicycle and pedestrian design and funding sources;
- updating the Project Summary Report Requirements to include additional detail;
- improving expenditure tracking processes to include information about bicycle and pedestrian facilities.

Combining stormwater infiltration with sidewalks, and trails

As the project development process changes to ensure bicycle and pedestrian safety and mobility are routinely considered, WSDOT should also incorporate features and elements that maximize resources and serve multiple functions when designing sidewalks and trails.

Why should stormwater be a consideration in bicycle and pedestrian projects?

Stormwater runoff from urban areas, particularly surrounding Puget Sound, has contributed to the degradation of water quality in Washington’s waters. Degraded water quality resulting from past and ongoing development is one of the major challenges faced in restoring the ecological health of Washington’s waters. Stormwater pooling can also be a barrier to safe bicycling and walking in Washington.

Research conducted at both the national and state levels points to opportunities to reduce negative impacts of stormwater using a combination of regional and site-level techniques to prevent, treat, and store runoff and associated pollutants. Some low-impact development techniques are consistent with, and improve the ability to, bike and walk safely, such as bio-retention areas that buffer sidewalks or refuge islands. Others go further by changing site-design practices to maximize existing infrastructure by focusing development, reducing parking spaces, narrowing streets to lower speeds, and eliminating cul-de-sacs.

How does bio-retention work?

Urban vegetation, landscaped stormwater infiltration areas, and green riparian corridors can form a network of hydraulic controls and provide safer and better places to bike and walk at the same time. If both regional and site level techniques are used, they can help to improve natural hydrologic functioning while also providing air purification, improving traffic safety and calming traffic, enhancing aesthetic character, instilling civic pride, and generally improving the image of urban areas.



Pervious concrete and bio-retention feature as part of sidewalk project in Portland, OR.

Regional and local commitment to the Plan

In Washington, cities and counties have jurisdiction over more than 70 percent of the streets and roadways that make up the state's transportation system. Many important decisions related to bicycle and pedestrian transportation are made by regional and local governments. This makes coordination among various transportation providers crucial, especially in project development. Local and regional agencies and organizations need to make similar improvements to those recommended for state agencies to ensure bicycle and pedestrian needs are addressed as intended by federal and state guidelines. The following is an initial list of actions to address these needed changes.

- Determine appropriate staffing levels to ensure increased coordination in project development.
- Increase outreach and communication with the public.
- Train project managers and designers in bicycle and pedestrian planning, design, and funding sources. Designers and project managers who typically work only on roadway projects may not be familiar with principles of bicycle and pedestrian travel, behavior, planning, scoping, and funding options.
- Ensure regional and local plans have measurable goals that will move toward accomplishing the state and federal goals.
- Ensure regional and local plans include project lists of priority bicycle and pedestrian improvements and programs.
- Improve travel demand models to include bicycling and walking and green house gas estimation as part of transportation projects and transportation plans.

State level commitment to the Plan

While Washington State owns and operates nine percent of the highways and roadways that make up the over 80,000 mile transportation system, the State level of commitment to bicycle and pedestrian modes of travel is critical in order to move toward the Plan's goals for doubling biking and walking and reducing pedestrian and bicyclist involved collisions by five percent per year.

WSDOT has the important role of establishing guidance and standards for bicycle and pedestrian facilities for all state funded highway projects, as well as all state or federally funded local projects. WSDOT also coordinates the State Bicycle and Pedestrian Program, including related grants and technical assistance for state, regional, and local agencies. Other tasks and stewardship efforts should be undertaken by the different Washington State agencies including:

- Washington Traffic Safety Commission,
- Washington State Department of Health,
- Washington State Patrol,
- Washington State Office of the Superintendent of Public Instruction,
- Washington State Department of Licensing,
- Washington State Department of Community Trade and Economic Development,
- Washington State Department of Ecology, and
- Washington State Recreation and Conservation Office.

Coordination efforts among these state agencies should be increased to enable regular program performance measurement and reporting.

Transportation Commission

As the Washington State Transportation Commission begins its next update of the Washington Transportation Plan, it is committed to addressing bicycling and walking to a greater degree than in the past. The Transportation Commission considers the full costs and benefits of bicycling and walking in urban and suburban areas within Washington State including evaluating the cost of providing and maintaining additional facilities and the benefits to air and water quality, analysis of walking and biking investments, and related policies to address climate change, increasing economic vitality, improving health, and medical cost savings.

Washington State Department of Transportation (WSDOT)

While the WSDOT Design Manual states that bicycle and pedestrian facilities are “required” or “included” in all projects, many project definitions and project scoping processes do not include bicycle and pedestrian facilities. The following tasks are the first steps in establishing new procedures and practices to ensure bicycle and pedestrian facilities are being built where they're needed.

- Update guidance and standards. When WSDOT updates the Design Manual, the Traffic Operations Manual and other guidance and standards, consideration will be given to the design recommendations of this Plan and the detail provided in *Report F: Design Guidance*.
- Scoping guidance for pedestrian and bicycle projects, as well as roadway improvement and bridge replacement projects is needed and should include routine consideration of bicycle and pedestrian needs in addition to roadway needs.

- Improve coordination efforts with local agencies and transit providers. WSDOT will help local agencies identify resources to improve conditions for bicycling and walking, staff a committee of state agencies in order to deliver regular program performance reports, and develop guidance on locating transit facilities.
- Create a technical advisory body. An advisory group of topic experts will assist in meeting the 20-year goals. The presence of this group, as with other such groups in Washington State, will also ensure accountability and provide direction.
- Develop an internal training program. Increase overall awareness of best practices in bicycle and pedestrian planning, project development, and operations.

Washington State Patrol (WSP) and Washington Traffic Safety Commission (WTSC)

In partnership, Washington State Patrol and Washington Traffic Safety Commission will initiate training programs for law enforcement professionals to increase overall knowledge and enforcement of bicycling and walking laws in Washington State. WTSC will increase research and public education efforts related to pedestrian and bicycle safety.

Washington State Department of Licensing (DOL)

DOL has the important role of adding bicyclist and pedestrian safety information to drivers' education curriculum (RCW 46.82.420) which over time this will be expanded to include technical assistance and mobility education, which will help to educate and inform the public of different transportation options and the importance of accessible design.

Washington State Department of Health (DOH)

DOH estimates that more than half of Washington State's residents are overweight or obese. Walking and bicycling are often encouraged as a way to become more physically active and curb obesity rates. DOH is moving quickly to address the relationship between public health, community design, and transportation by implementing several programs including Steps to a Healthier Washington, the *Active Community Environments Initiative*, and Healthy Communities Programs. Each of these programs has partnered with local agencies to fund small bicycle and pedestrian mobility improvements like bicycle parking, signage, and lighting.

DOH will continue to promote bicycling and walking as effective ways to reduce obesity risk factors for Washington residents by increasing support to their transportation partnership programs including the *Active Community Environments Initiative* and *Steps for Healthier Communities*. DOH staff will continue to assist WSDOT with research and analysis of the relationship(s) between public health and the transportation system. DOH will also help WSDOT determine the potential for inclusion of bicycle and pedestrian facilities in a state strategy for reducing vehicle miles traveled and CO₂.

Washington State Department of Community Trade and Economic Development (CTED)

CTED, through its Growth Management Office, will continue increasing support and technical assistance related to urban planning approaches. These efforts support active and livable community design and the elements of local comprehensive plans that address bicycling and walking (RCW 36.70A). CTED can also make new tools available to local governments so that they may consider bicycling and walking as part of their transportation level of service standards and concurrency. As CTED and the Washington State Department of Ecology continue to work together to achieve the goals established by the Governor and Washington State Legislature for reducing vehicle miles

traveled (VMT) and related greenhouse gas emissions. They will consider bicycling and walking in related models, studies and research efforts. WSDOT, Association of Washington Cities, and CTED will evaluate pilot projects that provide tools to cities and counties not planning under GMA.

Washington State Recreation and Conservation Office (RCO)

In partnership, Washington State Recreation and Conservation Office, Washington State Department of Transportation, and Regional Transportation Planning Organizations will increase efforts to eliminate gaps and create a Statewide Trail Network that fulfills all types of transportation needs from commuting to recreation, to school trips.

Washington's Office of the Superintendent of Public Instruction (OSPI)

The Office of the Superintendent of Public Instruction, in partnership with WSDOT, and other organizations, will increase technical assistance and training to promote the use of transportation funds for student's pedestrian and bicycle safety, mobility improvements, and education. This will help schools decrease traffic congestion and reduce collisions involving children near schools.

Conclusions

- Overall, biking and walking are increasing in Washington, particularly in cities where housing infill is occurring. Bicycle commuting has increased 75 percent in the past ten years.¹⁰ Biking and walking currently account for about six percent of statewide commute trips.¹¹ In the Puget Sound Region, bicycling and walking account for nine percent of all trips.¹² In several urban core areas across Washington, bicycling and walking account for 15 percent of all trips.¹³
- Doubling current levels of bicycling and walking is achievable. In Washington State, more than half of all trips are under three miles, yet 80 percent of these trips are made by car. Commuting to work accounts for about 20 percent of all vehicle miles traveled, so 80 percent of all the vehicle miles we drive are for other purposes. Bicycling and walking account for 5-7% of non-commute trips currently and many more of these trips could be accomplished by biking and walking as gas prices rise.¹⁴
- Public support is strong for building safe places to walk and ride bikes. The statewide survey, showed that 86 percent of Washington residents have biked or walked for transportation over the past year. 70 percent of Washington residents surveyed support an increase in spending to create more safe places to bike and walk if current transportation funds are used; over 50 percent of citizens supported a tax increase.
- Washington has programs that encourage people to bicycle and walk, but limited resources to improve the built environment for biking and walking, for enforcement of biking and walking laws, and for providing public education. Bicycle and pedestrian engineering improvements are approximately two percent of the transportation budget.
- **Appendix A-C** of this Plan lists conceptual solutions to make the transportation system safer and better for bicycling and walking. A review of adopted six and ten year local plans and state highways found \$1.6 billion in conceptual solutions to existing pedestrian and bicycle safety and mobility needs. Of this \$1.6 billion, \$400 million has been grouped by WSDOT into the categories of Gap Projects, School Related Projects, and No Net Loss in Safety Projects on state highways.
- The most frequent comment received during plan development was the recognition of the need for more and better intra-county connections and links to schools, transit, and ferries. This underscores the important role Regional Transportation Planning Organizations play in bicycle and pedestrian transportation.
- In order to continue to improve conditions for bicycling and walking and help reverse the rising rate of obesity in Washington State, local governments, transit providers, regional and state agencies will have to take coordinated implementation steps. This Plan takes a first step by establishing a goal of decreasing collisions by five percent per year, while doubling biking and walking over the next 20 years and identifying objectives and performance measures in each of the State's five transportation policy areas.

¹⁰ US Census, www.census.gov/.

¹¹ National Household Travel Survey (NHTS; US Census.

¹² Regional Household Activity Survey Analysis Report, PSRC (2006)). www.psrc.org/data/surveys/hhsurvey/index.htm

¹³ Ibid.

¹⁴ National Household Travel Survey (NHTS), www.bts.gov/programs/national_household_travel_survey/.